

REPORT ON THE PROBLEMS RAISED BY THE GENERIC NAME "COLYMBUS" LINNAEUS, 1758 (CLASS AVES)

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(Commission's reference Z.N.(S.)78)

At its Session held in Paris in 1948 the International Commission on Zoological Nomenclature had under consideration the problems raised by the generic name *Colymbus* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) 1 : 135) (Class Aves). Differences of opinion among ornithologists as to whether *Colymbus arcticus* Linnaeus, 1758, a Diver (Loon) or *Colymbus cristatus* Linnaeus, 1758, a Grebe, was, or should be accepted as being, the type species of the genus has divided ornithologists for three full generations and has led to the most serious confusion and lack of uniformity not only at the genus-name level but also at the family-name and Ordinal-name levels. By the time of the Paris Session, the International Commission itself had had this matter under consideration for twenty-two years, an application on this subject having been submitted to it by the late Dr. (subsequently Commissioner) Witmer Stone (*Academy of Natural Sciences of Philadelphia, Pennsylvania, U.S.A.*) as far back as 1926. No progress of any kind had however been made towards securing a settlement of this question.

2. At Paris the Commission came to the conclusion that the views held on this subject by the two opposing groups of ornithologists were so strongly held and the practice of each so deeply entrenched that there seemed little prospect of realising the hope that it had long entertained that ornithologists generally or at least a representative group of ornithologists would come forward with agreed proposals designed to restore uniformity and stability in this branch of ornithological nomenclature. The Commission concluded, therefore, that its proper course was to reach with as little further delay as possible a decision on the issue submitted to it by Dr. Witmer Stone in 1926. The Commission decided, as a first step, to obtain a report on the nomenclatorial issues involved from "a zoologist who was an authority on nomenclature but was not himself an ornithologist and who therefore had not had to prejudge the question in the course of his own work." Having reached this decision, the International Commission invited me to undertake this task in a personal capacity and I agreed to do so (1950, *Bull. zool. Nomencl.* 4 : 361-362). The procedure so agreed upon was reported to, and approved by, the Section on Nomenclature of the Congress and by the Congress itself in Plenary Session.

3. In view of the importance of making progress with this case as rapidly as possible, I began the investigation entrusted to me not long after the close of the Paris meeting. When I came to examine in detail the arguments that had been advanced at different times by various ornithologists, I realised that I could not complete my Report until the *Official Record of the Proceedings* in Paris had been agreed upon in the prescribed manner, for it was evident that, in order to put into their proper perspective some of the arguments which had been advanced in regard to the present case, it would be necessary to quote from the *Official Record* passages containing decisions taken in Paris in regard

to aspects of the *Règles*, the meaning of which had previously been open to doubt and which had a material bearing on the question referred to me for report.

4. The *Official Record of the Proceedings* in Paris was approved in January 1950, and I should thereupon have completed my Report and submitted it to the International Commission had it not been for the fact that I then received a letter from Commissioner Henning Lemche (*Universitetets Zoologiske Museum, Copenhagen*) informing me that his attention had been drawn by the Danish ornithologist Dr. Finn Salomonsen to certain proposals for an agreed settlement of the *Colymbus* problem which had been put forward by Dr. Erwin Stresemann (*Berlin*) at the International Ornithological Congress held at Oxford in 1934; no definite action in this matter had transpired either then or subsequently, but an International Ornithological Congress, the first since the war, was due to be held in Sweden at Uppsala later that year (1950), and it was possible that this question might be brought before that Congress. I regarded this suggestion as extremely valuable and one calculated to provide a solution of the *Colymbus* problem along the lines long desired by the Commission but so far never secured, namely through the presentation to the Commission by ornithologists themselves of a proposal for the solution of this problem. Later, I learnt, through Commissioner Lemche, that Dr. Salomonsen had himself decided to bring this matter before the Uppsala Congress, and he kindly furnished me with a copy of the communication which he proposed to make to that Congress on this subject.

5. Dr. Salomonsen's decision to lay this matter before the Ornithological Congress created an entirely new situation, for, if that Congress were to agree upon proposals for submission to the International Commission on Zoological Nomenclature, the narrow issue on which in 1948 I had been invited to make a report might become of academic interest only. I accordingly decided to complete that Report but to withhold its submission to the Commission until after the meeting of the International Ornithological Congress at Uppsala later that year.

6. Shortly after the close of the Uppsala Congress I was informed by Colonel Richard Meinertzhagen that Dr. Salomonsen had duly presented his paper, that there had been a considerable discussion of a preliminary nature in regard to this and other individual cases of ornithological nomenclature at a public meeting specially convened for the purpose, that no decisions had been taken in regard to the name *Colymbus*, but that it had been decided to establish a Standing Committee on Ornithological Nomenclature under his Chairmanship, that that Committee would as soon as possible take into detailed consideration the proposal in regard to the name *Colymbus* submitted to the Uppsala Congress by Dr. Salomonsen and that he hoped to be able to submit the recommendations of the Standing Committee on this case to the International Commission at an early date. On 19th October 1950 Colonel Meinertzhagen informed me by letter that the Standing Committee was unanimously agreed in asking the International Commission to use its plenary powers in such a way as to secure that, through the suppression of the name *Colymbus* Linnaeus, 1758, the oldest available generic names for the Grebes and the Divers should be *Podiceps* Latham, 1787, and *Gavia* Forster, 1788, respectively.

7. When the application from the Standing Committee was submitted to the customary routine examination, I found references to a generic name *Gavia* which, if an available name, would have had priority over the name *Gavia* Forster, 1788, the name recommended by the Standing Committee for stabilisation as the generic name for the Divers. The name in question was *Gavia* Nozemann & Vosmaer, 1758 (in Moehring, *Gesl. Vogel.* : 5, 54), a name more commonly (though incorrectly) known as *Gavia* Moehring. Prior to the Session of the International Commission held in Paris in 1948, there was some doubt as to whether or not new names published in the Dutch edition of Moehring's *Avium Genera* prepared by Nozemann & Vosmaer and published in 1758 under the title *Geslachten der Vogelen* were available names. In Paris, however, the International Commission on Zoological Nomenclature examined this question and decided that the names in this post-1757 edition of Moehring's pre-1758 work had not been reinforced by adoption or acceptance, as prescribed originally in *Opinion* 5 and, since the Paris Congress in the *Règles* themselves (1950 *Bull. zool. Nomencl.* **4** : 150), and therefore that those names possessed no rights in zoological nomenclature (1950, *ibid.* **4** : 566-568). Thus, the alleged name *Gavia* Nozemann & Vosmaer, 1758, does not preoccupy the name *Gavia* Forster, 1788, for the Divers. In order to dispose of this matter once and for all, it will, however, be desirable that *Gavia* Nozemann & Vosmaer, 1758, should be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* with (as in similar cases) a note as to why this name is invalid.

8. The routine investigation of this case disclosed also the existence of three generic names consisting of the word *Gavia*, each published subsequent to *Gavia* Forster, 1788. The names in question are: (1) *Gavia* Oken, 1816, *Lehrbuch Naturgesch.* **3** (Zool.) (2) : 537; (2) *Gavia* Boie, 1822, Oken's *Isis* **10** : 563; (3) *Gavia* Gloger, 1842, *Hand-und Hilfsbuch Naturgesch.* **1** : 433. In accordance with the direction given to the International Commission by the International Congress of Zoology that decisions on individual applications are in future to cover all aspects of the problems submitted, the foregoing names should be added to the *Official Index of Rejected and Invalid Generic Names in Zoology* at the same time that the name *Gavia* Forster, 1788, is placed on the *Official List of Generic Names in Zoology*, if the proposal to that end submitted by the Standing Committee on Ornithology is approved by the International Commission. At the same time there should also be added to the *Official Index* the two junior homonyms of *Colymbus* Linnaeus, 1758, namely: (1) *Colymbus* Paetel, 1875 (*Fam. Gatt. Moll.* : 50); (2) *Colymbus* Hadding, 1913 (*Univ. Arssk. Lund* (n.f.) **9**(2) (No. 15) : 79).

9. During his last visit to England, Dr. Ernst Mayr (*The American Museum of Natural History, New York*) drew my attention to the reference by Hartert (1915, *Die Vögel paläarkt. Fauna* (2) : 1456) to a generic name consisting of the word *Gavia* of older date than *Gavia* Forster, 1788, and suggested that this was a matter which should be investigated before the application relating to the *Colymbus* problem was considered by the International Commission. In the work referred to by Dr. Mayr, Hartert applied the name *Colymbus* Linnaeus, 1758, to the Divers, treating *Colymbus arcticus* Linnaeus, 1758, as the type species. As in the case of other nominal genera recognised by him

as representing taxonomically valid genera, Hartert cited under the name *Colymbus* Linnaeus, the names of nominal genera of later date which he regarded as junior synonyms. The first such entry reads as follows:—" *Gavia* Forster 1788—non S. G. Gmelin 1770!" It is unfortunate that Hartert did not cite a bibliographical reference for the name *Gavia* Gmelin, 1770, for this name is not noted either by Sherborn in his *Index Animalium* or by Neave in *Nomenclator Zoologicus*, and it has proved a matter of some difficulty to trace the original reference to it. This reference has however kindly been supplied by Dr. Mayr (*in litt.*, 8th August 1952). It is as follows: *Gavia* Gmelin (S.G.), 1770, *Reise durch Russland zur Untersuchung der drey Natur-Reiche* 1: 152. This name was there used by Gmelin for a gull. (In furnishing this information, Dr. Mayr drew attention to the fact that, although the name *Gavia* is not now used for any genus of gull, it was frequently so used in the XIXth Century and that this word or its stem appears in a number of compound words which have been published for genera of gulls, e.g. *Gavina* Bonaparte, 1854; *Bruchigavia* Bonaparte, 1855; *Gabianus* Bruch, 1853.)

10. At the same time that Dr. Mayr furnished the foregoing information, he drew attention also to the fact that the first use in the literature of the word *Gavia* as a generic name was by Brisson in 1760 (*Ornithologie* 6: 196). Brisson clearly did not apply the principles of binominal nomenclature in his *Ornithologie*—he was what in past times was called a "binary author"—but that work is of importance in ornithology and it is for this reason that in its *Opinion* 37 (1911, *Smithson Publ.* 2013: 87-88) the International Commission on Zoological Nomenclature ruled in favour of the acceptance, as available, of new generic names published in the *Ornithologie* and this ruling was validated and confirmed in 1948 (see 1950, *Bull. zool. Nomencl.* 4: 65). It is evident therefore that the name *Gavia* Brisson, 1760, will need to be disposed of, if the recommendation by the Standing Committee on Ornithological Nomenclature is to be accepted. The fact that, as is now established, the word *Gavia* was used as a generic name at least twice (Brisson, 1760; Gmelin (S.G.), 1770) before it was so used by Forster in 1788 suggests the possibility that more intensive bibliographical investigations might bring to light some other use of *Gavia* as a generic name prior to Forster, 1788. In these circumstances, the only means by which an unchallengeable title could be provided for *Gavia* Forster, 1788, would be for the International Commission, when accepting that name for the divers, to adopt a procedure similar to that employed when in similar circumstances it was desired to give an impregnable position to the generic name *Spatangus* Gray, 1825 (Class Echinoidea) (see 1950, *Bull. zool. Nomencl.* 4: 526), that is, that the International Commission should use its plenary powers for the purpose of suppressing for the purposes both of the Law of Priority and of the Law of Homonymy all uses of the word *Gavia* as a generic name prior to *Gavia* Forster, 1788. At the same time it would be necessary to add to the *Official Index of Rejected and Invalid Generic Names in Zoology* the two names (consisting of the word *Gavia* (i.e. *Gavia* Brisson, 1760; *Gavia* Gmelin (S.G.), 1770) which are known to have been published before *Gavia* Forster, 1788.

11. Finally, it is necessary to note that under a decision taken by the Thirteenth International Congress of Zoology at Paris in 1948 it is necessary,

when any name is placed on the *Official List of Generic Names in Zoology*, to note against that name the gender of the word of which that name is composed (see 1950, *Bull. zool. Nomencl.* **4** : 341). Such entries will therefore be needed, if, as proposed by the Standing Committee on Ornithological Nomenclature, the names *Podiceps* Latham, 1787, and *Gavia* Forster, 1788, are now to be added to the *Official List*. The gender of the first of these names is masculine, that of the second, feminine.

12. I have consulted Colonel Meinertzhagen on the problem raised by the discovery of the generic names *Gavia* Brisson, 1760, *Gavia* Gmelin, 1770, and on the minor matters raised in paragraphs 7 and 8 of this Report, having communicated to him for this purpose a copy of this Report in draft. In reply, Colonel Meinertzhagen has since informed me that he is in full agreement with the action suggested in paragraphs 7, 8, 10, and 11 above which, as Chairman of the Standing Committee on Ornithological Nomenclature, he considers necessary and desirable for the purpose of giving effect to the proposal submitted to the International Commission by the Standing Committee under cover of his letter of 19th October 1950. In agreement with Colonel Meinertzhagen I have therefore prepared the revised form of request annexed to the present Report as Appendix 1. This form of request Colonel Meinertzhagen asks should be treated as constituting a textual revision of the application already submitted by the Standing Committee of which he is the Chairman. The Report on the narrow issue of the present position of *Colymbus* Linnaeus, 1758, under the *Règles*, which, as explained in paragraph 2 of the present Report, was prepared in response to the request addressed to me in 1948, is submitted as Appendix 2. It is submitted only for information, having been superseded, as the basis of possible action by the International Commission, by the proposal received later from the Standing Committee on Ornithological Nomenclature appointed by the International Ornithological Congress.

(signed) FRANCIS HEMMING.

28 Park Village East,
Regent's Park, London, N.W.1.
16th August 1952.

APPENDIX 1

**APPLICATION REGARDING THE NAME "COLYMBUS"
LINNAEUS, 1758, SUBMITTED TO THE INTERNATIONAL
COMMISSION ON ZOOLOGICAL NOMENCLATURE BY
THE STANDING COMMITTEE ON ORNITHOLOGICAL
NOMENCLATURE, AS REVISED IN CERTAIN MINOR
RESPECTS IN AGREEMENT WITH THE CHAIRMAN OF
THE STANDING COMMITTEE**

The International Commission on Zoological Nomenclature is asked :—

(1) to use its plenary powers :—

- (a) to suppress the generic name *Colymbus* Linnaeus, 1758, for the purposes of the Law of Priority but not for those of the Law of Homonymy ;
- (b) to suppress for the purposes both of the Law of Priority and of the Law of Homonymy any uses of the generic name *Gavia* prior to *Gavia* Forster, 1788 ;
- (c) to set aside all type selections hitherto made for the under-mentioned nominal genera and to designate, as their respective type species the nominal species specified below :—

Name of genus	Species proposed to be designated as type species of genus specified in Col. (1)
(1)	(2)
<i>Gavia</i> Forster, 1788, <i>Enchiridion Hist. nat.</i> 38 (gender of generic name : feminine)	<i>Colymbus immer</i> , Brünnich, 1764, <i>Orn. boreal.</i> : 38
<i>Podiceps</i> Latham, 1787, <i>Suppl. gen. Synopsis Birds</i> [1] : 294 (gender of generic name : masculine)	<i>Colymbus cristatus</i> Linnaeus, 1758, <i>Syst. Nat.</i> (ed. 10) 1 : 135

- (2) to place on the *Official List of Generic Names in Zoology* the generic names *Gavia* Forster, 1788, and *Podiceps* Latham, 1787, with, as their respective type species, the species designated, as proposed in (1)(c) above ;
- (3) to place the under-mentioned trivial names on the *Official List of Specific Trivial Names in Zoology* :—
 - (a) *cristatus* Linnaeus, 1758 (as published in the binominal combination *Colymbus cristatus*) (trivial name of type species of *Podiceps* Latham, 1787) ;

- (b) *immer* Brünnich, 1764 (as published in the binominal combination *Colymbus immer*) (trivial name of type species of *Gavia* Forster, 1788) :
- (4) to place the under-mentioned generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—
- (a) *Colymbus* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) **1** : 135), as proposed in (1)(a) above to be suppressed under the plenary powers) ;
- (b) *Colymbus* Paetel, 1875, *Fam. Gatt. Moll.* : 50) (junior homonym of *Colymbus* Linnaeus, 1758) ;
- (c) *Colymbus* Hadding, 1913 (*Univ. Arssk. Lund* (n.f.) **9**(2) (No. 15) : 79) (junior homonym of *Colymbus* Linnaeus, 1758) ;
- (d) *Gavia* Brisson, 1760 (*Ornithologie* **6** : 196) (as proposed, under (1)(b) above, to be suppressed under the plenary powers) ;
- (e) *Gavia* Gmelin (S. G.), 1770 (*Reise Russl.* **1** : 152) (as proposed, under (1)(b) above, to be suppressed under the plenary powers) ;
- (f) *Gavia*, all other uses as a generic name prior to *Gavia* Forster, 1788 (as proposed under (1)(b) above to be suppressed under the plenary powers) ;
- (g) *Gavia* Oken, 1816 (*Lehrbuch Naturgesch.* **3** (Zool.) (2) : 537) (a junior homonym of *Gavia* Forster, 1788) ;
- (h) *Gavia* Boie, 1822 (Oken's *Isis* **10** : 563) (a junior homonym of *Gavia* Forster, 1788) ;
- (i) *Gavia* Gloger, 1842 (*Hand-und Hilfsbuch Naturgesch.* **1** : 433) (a junior homonym of *Gavia* Forster, 1788).

APPENDIX 2

REPORT ON THE TYPE SPECIES OF THE NOMINAL
GENUS "COLYMBUS" LINNAEUS, 1758, PREPARED BY
MR. FRANCIS HEMMING IN RESPONSE TO AN INVITATION
BY THE THIRTEENTH INTERNATIONAL CONGRESS
OF ZOOLOGY, PARIS, 1948

To :—

The International Commission on Zoological Nomenclature

28 Park Village East,
Regent's Park,
London, N.W.1.

9th February 1950.

In compliance with the request addressed to me as "a zoologist who was an authority on nomenclature but was not himself an ornithologist and who therefore had not had to prejudge the question in the course of his own work" by the Section on Nomenclature of the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 5 : 153) on the recommendation of the International Commission (1950, *Bull. zool. Nomencl.* 4 : 361-362), a request later confirmed, with other recommendations submitted by the Section on Nomenclature and by the International Commission, by the International Congress in Plenary Session (1950, *Bull. zool. Nomencl.* 5 : 131), I have the honour to submit the following Report on "the question of the nominal species which, under the *Règles*, is the type species of the genus *Colymbus* Linnaeus, 1758 (Class Aves)."

2. When the foregoing invitation was extended to me, the urgency of the problem remitted to me for examination was strongly stressed by the International Commission. I accordingly began this investigation as soon as possible after the close of the Paris Congress. In consequence, the first draft of the present Report was completed some time ago. It has not however been possible for me until now to complete and sign this Report, for it was necessary to wait until the *Official Record of Proceedings* at Paris both of the International Commission and of the Section on Nomenclature of the Congress had been approved in the prescribed manner, since it was essential in the present Report at certain points to be able to quote from the *Official Record* passages containing decisions which had a direct bearing upon the problem remitted to me for report. Now, however, that the *Official Record* in question has been finally approved and is in page proof and I am in consequence in a position to quote the passages in question, I have completed my Report which I now submit for consideration.

3. **Arrangement of the present Report ;** In the present Report I first examine Article 30 of the *Règles*, the Article which governs the fixing of type species of nominal genera. Having thus established under which of the Rules in Article 30 the type species of the nominal genus *Colymbus* Linnaeus, 1758, falls to be determined, I examine in turn the claims which at different times have been advanced on behalf of various authors for recognition as the author

by whom the type species of this nominal genus was determined. I have not thought it either necessary or desirable to quote from the numerous papers which at different times have been published on this subject, in view especially of the fact that much of the argument adduced in the earlier of these papers is beside the point, those arguments being based upon the assumed existence of a "Law of Elimination," a method for determining the type species of genera which, as is well known, had a considerable vogue prior to the adoption in 1901 of the present *Règles*, in which, however, such a provision found no place (see paragraph 16 below).

I. QUESTION OF THE RULE IN ARTICLE 30 UNDER WHICH THE TYPE SPECIES OF THE NOMINAL GENUS "COLYMBUS" LINNAEUS, 1758, WAS DETERMINED

4. The nature of the provisions in Article 30 relating to the determination of the type species of nominal genera : Article 30, the Article in the *Règles* which governs the determination of the type species of nominal genera, contains a series of Rules for the foregoing purpose and prescribes that these Rules are to be applied successively. Thus, in order to make a start in determining the type species of any given nominal genus, it is necessary to examine the position of that nominal genus in relation to each Rule in turn, for it is not until it has been established that the type species of such a genus was not determined under any of the preceding Rules that the position of that genus in relation to any of the later Rules has any relevance whatever. Accordingly, in the present part of this Report, I examine the position of the nominal genus *Colymbus* Linnaeus, 1758, in relation to each successive Rule in Article 30 for the purpose of ascertaining which of those Rules is applicable to that generic name.

5. Rule (a) (type species by original designation) : Rule (a) provides that, where the original author of a generic name himself designates a nominal species as the type species of the nominal genus so named, that action is final. When in 1758 Linnaeus published the Tenth Edition of the *Systema Naturae*, he did not designate type species for any of the nominal genera which he then established, for at that time the need for nomenclatorial purposes of such a concept as that of a "type species" for a nominal genus had not been recognised. Accordingly, Linnaeus did not in 1758 himself designate a type species for the nominal genus *Colymbus* Linnaeus. Rule (a) in Article 30 has therefore no bearing on the present case.

6. Rule (b) (type species by indication through the use of the words "typicus" or "typus" as the trivial name of one of the included species) : None of the nominal species referred by Linnaeus to his genus *Colymbus* bore as its trivial name either the word "*typicus*" or the word "*typus*." Rule (b) has therefore no bearing on this case.

7. Rule (c) (type species by monotypy) : Linnaeus placed more than one nominal species in the genus *Colymbus*. This genus is therefore not monotypical, and Rule (c) has, in consequence, no relevance to this case.

8. Rule (d) (type species by absolute tautonymy) : None of the nominal species referred by Linnaeus to the genus bore as its trivial name the

word "*colymbus*." In its simplest form Rule (d) therefore does not apply to the present case. Nor does this Rule so apply under either of the two extensions made by *Opinions* 16 and 18 respectively (for the current application of the former of which see 1950, *Bull. zool. Nomencl.* 4: 154, and for the latter, *ibid.* 4: 153). For none of the nominal species cited by Linnaeus as belonging to the genus *Colymbus* either (1) was then cited with a synonym consisting of a pre-1758 univocal specific name consisting of the word "*Colymbus*" (*Opinion* 16) or (2) possesses a synonym having, as its trivial name, the word "*colymbus*" (*Opinion* 18).

9. Rule (e): The application of the term "Rule" to this provision is a misnomer, for it does not provide a test for determining the type species to be applied after Rule (d) and before Rule (f). All that this provision does is to deny eligibility for consideration as candidates for the status of type species to three classes of nominal species, namely (a) nominal species not included in the nominal genus concerned at the time when its name was first published; (b) nominal species which were *species inquirendae* from the standpoint of the author of the generic name concerned; (c) nominal species which were only doubtfully referred to the genus concerned by the author of the name of that genus. None of the species referred by Linnaeus in 1758 to the genus *Colymbus* was a *species inquirenda* from his standpoint, nor was any of those species only doubtfully referred by him to that genus. Accordingly, neither the second nor the third of the provisions contained in the so-called Rule (e) has any bearing on the question of the type species of the genus *Colymbus* Linnaeus, 1758. The first of these provisions (that which excludes from eligibility as type species any species not placed in a given genus by the original author of the generic name concerned), especially as clarified by the International Congress of Zoology in 1948 (as to which see paragraph 22 below), does, as will be seen in later parts of this Report, have an important bearing upon the validity of the arguments that have been advanced by some of those who have taken part in the discussion regarding the species to be accepted as the type species of *Colymbus* Linnaeus, 1758.

10. Rule (f) (type species (i) of a nominal genus established to provide a name for an older nominal genus possessing an invalid name and (ii) of a nominal genus the name of which has been replaced for the foregoing reason): The generic name *Colymbus* Linnaeus, 1758, was not published as a substitute for the name of an older nominal genus, nor has this name ever been replaced on the ground that it was invalid. Thus, Rule (f) has no bearing upon the present case.

11. Rule (g) (type species by subsequent selection): Having now examined in turn each of the Rules in Article 30 lettered (a) to (f) (both inclusive) and found that none of them is applicable to the name *Colymbus* Linnaeus, 1758, we are left only with Rule (g), the last of the mandatory provisions in the foregoing Article. We see therefore that, in order to ascertain what is the type species of the nominal genus *Colymbus* Linnaeus, 1758, it is necessary to ascertain by reference to the literature which of the species included in this genus by Linnaeus in 1758 was first selected to be the type species in a manner which satisfies the requirements of Article 30 of the *Règles*.

II. EXAMINATION OF THE CLAIMS ADVANCED ON BEHALF OF CERTAIN AUTHORS FOR RECOGNITION AS HAVING, AT SPECIFIED DATES, BEEN THE FIRST AUTHOR VALIDLY TO SELECT A TYPE SPECIES FOR THE NOMINAL GENUS "COLYMBUS" LINNAEUS, 1758

12. In the present Section I examine first the conditions which under Rule (g) in Article 30 must be satisfied in order to qualify the action of any given author to rank as constituting a valid selection of a type species for a nominal genus, the type species of which has not been determined under any of the earlier Rules in the foregoing Article. In the light of the survey so made, I then examine, in turn, the claims which have at different times been advanced for the recognition of particular authors as having, on specified dates, been the first author validly to select a type species for the nominal genus *Colymbus* Linnaeus, 1758.

(a) Provisions relating to the selection by an author of a type species for a given nominal genus prescribed in Rule (g) in Article 30 of the "Règles" and associated provisions

13. In order both to shorten and to simplify the later consideration of the claims which have been advanced in favour of the recognition of particular authors as having at specified dates been the first author validly to select a type species for the nominal genus *Colymbus* Linnaeus, 1758, I examine in the following paragraphs the conditions which must be satisfied in order to qualify the action of any given author for recognition as constituting a valid type selection under the *Règles*. This review appears to me essential, not only because in some of the arguments which have been advanced in regard to the type species of the genus *Colymbus* Linnaeus, 1758, those provisions have been misunderstood or even disregarded, but also because prior to 1948 some of the provisions concerned contained serious ambiguities which have now been removed as the result of decisions taken by the Thirteenth International Congress of Zoology at its meeting held in Paris in that year. The provisions of which it is necessary to take note are seven in number. Of these provisions the first consists of a qualification directly inserted into Rule (g) in Article 30 at the time (Boston, 1907) when that Article in its present form was inserted in the *Règles*: the second and third follow from interpretations of Rule (g) given by the Commission in *Opinions* rendered by the International Commission prior to 1939, each of which either in its original, or in some clarified, form was incorporated into the *Règles* by the International Congress of Zoology in 1948; the fourth, fifth, sixth and seventh of these provisions all relate to matters on which prior to 1948 the meaning of the *Règles* was in doubt and on which authoritative clarifications were in that year provided by the Thirteenth International Congress of Zoology.

(i) Provisions relating to the selection of the type species of a nominal genus contained in Rule (g) in Article 30 in the form in which that Article existed prior to July 1948

14. The expression "select the type species": Rule (g) in Article 30, as that Article stood prior to July 1948, provided that, where the type species

of a given nominal genus had not been determined under any of the preceding Rules in that Article, its type species should be the first of the originally included species to be so selected by a subsequent author. This provision was accompanied by the following interpretation of the meaning to be attached to the expression "select the type" (an expression amended to "select the type species" by the Thirteenth International Congress of Zoology—see 1950, *Bull. zool. Nomencl.* 4:300): "The meaning of the expression 'select the type' is to be rigidly construed. Mention of a species as an illustration or example does not constitute a selection of a type."

(ii) Provisions relating to the selection of the type species of a nominal genus originally promulgated in "Opinions" rendered by the International Commission on Zoological Nomenclature and in 1948 incorporated into the "Règles" either in their original or in a modified form

15. The *Opinions* relating to the interpretation of Rule (g) in Article 30 rendered by the International Commission on Zoological Nomenclature prior to the meeting held in Paris in 1948 which have a bearing upon the present case are *Opinions* 6 and 62. The rulings given in these *Opinions* are discussed in the two immediately following paragraphs.

16. The so-called "Law of Elimination" not recognised in the "Règles" as a mandatory provision: Prior to the international regulation of zoological nomenclature (through the adoption of the present *Règles* by the Fifth International Congress of Zoology at Berlin in 1901) zoologists possessed no authoritative guide as to how they should proceed when they desired to split up a previously established genus, save in those cases where the original author of the generic name concerned had himself specified a type species for the genus so named. For, although the concept of a "type species" in relation to genera was generally accepted, there was no agreement how to apply that concept in relation to nominal genera established without designated type species, for example, nominal genera, other than monotypical genera, established by Linnaeus and other authors of later date. Authors were forced therefore to make a choice for themselves as to how they should proceed in this matter. The result, as was inevitable, was that there was the greatest diversity of practice: some authors applied rules similar to those later embodied in the present Rule (g) in Article 30, under which the species first selected to be the type species of a given species was accepted as such; others accepted as the type species the first of any series of species placed in a given nominal genus by its author (the so-called "chef de file" system); others adopted a system under which it was assumed that, whenever an author on taxonomic grounds removed a species from a given previously established nominal genus by placing it in some other nominal genus, the species so removed ceased to be eligible to become the type species of the genus from which it had been removed; in this way, it was argued, the field from which a type species could be selected was gradually narrowed until finally either only one of the original species was left in the genus and that species automatically became the type species or until some author selected as the type species of the genus one of the originally included

species which had not yet been removed from that genus on taxonomic grounds. This method of determining the type species of a genus was known as the "Law of Elimination." Theoretically, this system possessed advantages over any other system, for, if it could have been applied in a uniform manner, it would have avoided the confusing transfers of generic names from one genus to another which have often resulted from the acceptance as the type species of a genus of the first originally included species to be so selected. Unfortunately, however, insuperable difficulties were often encountered in applying this superficially simple rule owing to differences of opinion among specialists as to what action did or did not constitute the removal of a species from a given genus. The result was that, far from providing the stability which had been hoped for, this so-called "Law" often resulted in the adoption by specialists of totally different views as to the type species of any given genus. This method of determining the type species of a genus had the further weakness that its application was extremely laborious involving the examination of the entire literature of any group before a type-determination could even be attempted and thus placed a premium upon bibliographical investigations as contrasted with zoological investigations. It was for these reasons that, when the present *Règles* were adopted, the "Law of Elimination" was given no place in the mandatory provisions embodied in Article 30. The only concession then granted to this former unofficial "Law" was the insertion in the non-mandatory "Recommendations" at the end of Article 30 of the advice to specialists when selecting the type species of a genus to bear in mind the importance of promoting stability by not selecting as the type species of genera species which on taxonomic grounds are currently treated as having been removed therefrom. Even this "Recommendation" occupies only the fourth place in the list of "Recommendations" there given. Normally, practices in vogue before the adoption of the *Règles* which however failed to secure admittance to the *Règles* are of historical interest only, but in the particular case of the nominal genus *Colymbus* Linnaeus the application of the so-called "Law of Elimination" bulked so largely in the early days—and, indeed, still forms the basis of the argument advanced by one large and important group of workers—that it seems essential in the present Report to make it perfectly clear that in its original form the "Law of Elimination" finds no place in the *Règles*. It should be noted at this point that in one extremely limited application official approval has been given to the principle of "elimination" in a mandatory provision enacted since the adoption of the *Règles* in 1901. This was in 1910, the year in which the Commission's *Opinion* 6 was published (*Smithson. Publ.* 1938 : 6), for in that *Opinion* the Commission ruled that, where a nominal genus was established with two nominal species but without a designated type species and later one of those nominal species was made the type species of a newly established monotypical genus, it was to be deemed for nomenclatorial purposes to have been removed by elimination from the earlier genus, which was thus left with only one species which accordingly became the type species. In the years following the publication of this *Opinion* it was sometimes argued that the ruling there given need not be regarded as being confined to cases where a species was removed from a genus to a monotypical genus and further that the principle embodied in this *Opinion* was properly applicable also to cases where more than two species were placed in a genus and later authors removed

some of those species, either singly or in groups. This latter argument, if well founded, would have amounted to a full-scale recognition of the Law of Elimination and would greatly have reduced the scope within which Rule (g) in Article 30 would operate and in some cases would have completely superceded that Rule. This matter was considered by the Commission and the Congress at Paris in 1948, and it was then decided to incorporate in the *Règles* the decision originally given in *Opinion* 6, clarified, however, in such a way as to make it absolutely clear that it applied only to the limited class of case originally specified in that *Opinion* (see 1950, *Bull. zool. Nomencl.* 4 : 157).

17. A nominal species which is the type species of one genus eligible for selection as the type species of another genus: In the preceding paragraph we have considered the position of the so-called "Law of Elimination" in relation to the provisions of the *Règles* as adopted at Berlin in 1901, and have specially noted the one instance in which, through *Opinion* 6, mandatory force was given to the principle embodied in that so-called "Law," which, as explained, had in its main form been rejected by the authors of the present *Règles*. We have here to note a decision taken by the Commission in *Opinion* 62 (published in 1914) (*Smithson Publ.* 2256 : 147-149) rejecting an attempt to secure a further partial acceptance of the principle of elimination. Up to that time it had sometimes been argued that, where a nominal genus had been established with a number of included nominal species but without a designated type species, the species which were eligible for selection by a later author acting under Rule (g) in Article 30 were not all the originally included nominal species but only those species which had not in the meantime become the type species of other genera. This argument, which, it will be observed, relates to one of the situations which (as explained in paragraph 16) some authors had sought to argue could be brought within the scope of the decision taken in *Opinion* 6, was rejected by the Commission which ruled that a species which was the type species of one genus was still eligible for selection as the type species of another genus. This decision was endorsed both by the Commission and the Congress in 1948 and was embodied by the latter in the *Règles* (see 1950, *Bull. zool. Nomencl.* 4 : 156).

(iii) Provisions relating to the selection of the type species of a nominal genus adopted by the Thirteenth International Congress of Zoology, Paris, 1948

18. At Paris in 1948 the International Commission on Zoological Nomenclature obtained the approval of the Thirteenth International Congress of Zoology for the insertion in the *Règles* of provisions clarifying the meaning of Rule (g) in Article 30 in four respects. Each of these clarifications has, as will be seen, a bearing on the question of the species to be accepted as the type species of the nominal genus *Colymbus* Linnaeus, 1758. These clarifications are accordingly described briefly in the following paragraphs.

19. Meaning to be attached to the word "select" as used in the expression "select a type species" as used in Rule (g) in Article 30: Reference has already been made (paragraph 14 above) to the supplementary provision in Rule (g) in Article 30 which makes it clear that that Rule is not satisfied if an author merely cites one of the species originally included in a

nominal genus established by some earlier author as being an "illustration" or "example" of that genus and prescribes that the expression "select a type" is to be "rigidly construed." This provision removed what otherwise would have been a serious ambiguity in that Rule, but it left obscure another matter which, as every worker in systematic zoology has occasion to know, constantly arose, whenever it was necessary to determine whether a type species had been validly selected for a given nominal genus. The problem involved was whether an author was to be deemed to have selected the type species of a given nominal genus when, while stating categorically that a given species was the type species, he made it clear also that he regarded himself, not as selecting that species to be the type species, but as doing no more than place on record that that species was the type species as the result of action taken by an earlier author or by earlier authors. The most frequent situation of this kind arises in the case of papers published before the adoption of the *Règles* where an author guiding himself by the so-called "Law of Elimination" (see paragraph 16 above) came to the conclusion that, as the result of the removal of species to other genera, only one species remained eligible for the position of type species of the genus under examination and therefore that species had automatically become the type species "by elimination." The same problem arises also where an author states that a given species is the type species of a genus because it had been so selected by a previous author, when on further examination it is found that no such earlier selection had been made. In view of the very large number of currently accepted type selections which rest upon statements made in papers published before 1901 by authors working under the "Law of Elimination," it was obvious that any ruling which deprived statements of the kind described above of the status of type selections would cause the utmost havoc and confusion. It was obvious also, however, that a definite ruling on this subject was required in order to make it impossible validly to question the acceptability of such type selections. Accordingly, in Paris in 1948 the Thirteenth International Congress of Zoology, on the recommendation of the International Commission on Zoological Nomenclature, agreed to insert in the *Règles* words making it clear that, "for the purposes of Rule (g) in Article 30, an author is to be treated as having selected a given originally included nominal species to be the type species of a given nominal genus not only when he . . . states that he is so selecting that species but also when he does no more than state that a specified such species is the type species of the nominal genus concerned, irrespective, in the latter case, of whether he states or implies, either correctly or otherwise, that that nominal species had been selected by some previous author to be the type species of that nominal genus, or that the nominal species had become the type species of that genus through the operation of some rule (for example, the so-called "Law of Elimination") not recognised in the *Règles* as a mandatory provision, provided in such a case that the author concerned makes it clear that he himself accepts, for whatever reason, the species in question as the type species of the genus concerned" (see 1950, *Bull. zool. Nomencl.* 4 : 181-182).

20. Action taken in regard to a given generic name prior to its first valid publication subsequent to 1757 irrelevant for the purposes of Article 30 : Prior to 1948 it occasionally happened that, notwithstanding

the provision in Article 26 and the associated *Opinion* 3 (1910, *Smithson. Publ.* 1938: 6) that for the purposes of the *Règles* zoological nomenclature has, as its starting point, the publication in 1758 of the Tenth Edition of the *Systema Naturae* of Linnaeus, an author would seek to support an argument in relation to some particular name by claiming that some action in regard to that name taken prior to 1758 had some bearing either upon the species to be regarded as the originally included species of the nominal genus so named or as regards the eligibility of such species for selection after 1757 as the type species of the genus in question. In order to dispose of fallacious arguments of this sort, the Thirteenth International Congress of Zoology, Paris, 1948, on the advice of the International Commission on Zoological Nomenclature, decided to insert in the *Règles* words to make it clear that "Article 30 relates only to the designation, indication, or selection of the type species of a nominal genus published subsequent to 31st December 1757, that is to say to the name of a genus originally published subsequent to the above date by a given author in a given work and that the action then taken by that author is alone relevant to the question, (i) of what species are to be regarded as having been originally included in the genus concerned . . . or (ii) of whether the type species of the genus in question is to be treated as having been designated . . . at the time of the original publication of the generic name concerned" (see 1950, *Bull. zool. Nomencl.* 4: 347-348).

21. A type selection related to any place of publication other than the original place of publication of a generic name invalid under the "Règles": Another argument occasionally advanced before 1948 in relation to particular cases (of which the name *Colymbus* Linnaeus, 1758, was one) was that, where a given word had been used as a generic name prior to the starting point of zoological nomenclature (as defined in Article 26) as well as at or after that starting point and some later author purported to select a type species for the genus as published before 1758, that action should be regarded as constituting also a selection of a type species for the genus as established after the starting point of zoological nomenclature, i.e. after the close of the year 1757. This argument was considered and rejected in Paris, in 1948, when the Thirteenth International Congress of Zoology, on the advice of the International Commission on Zoological Nomenclature, agreed to insert in the *Règles* words making it clear that "no selection of the type species of a given nominal genus, which is related to any publication of the name of that genus other than its first valid publication by its author . . . is to be accepted as a selection of the type species of that genus for the purposes of Rule (g) in Article 30" (see 1950, *Bull. zool. Nomencl.* 4: 348).

22. Nominal species eligible for selection as the type species of any given nominal genus: We have now examined the decisions taken by the Thirteenth International Congress of Zoology for the purpose of clarifying the provisions regarding the method to be followed in selecting the type species of a nominal genus under Rule (g) in Article 30. But the obscurities which formerly marred that Rule and made its application uncertain and open to question in many cases were not the only difficulties which up to 1948 had confronted systematists in attempting either to determine what nominal species was the type species of a given nominal genus or what nominal species

were eligible for selection as such. For, although Article 30 contained (in the provision misnamed "Rule (e)") a provision excluding certain nominal species from consideration as possible type species for any given nominal genus, it unfortunately contained no positive provision specifying what nominal species were to be regarded as eligible for selection as type species. In particular, there was nothing in Article 30 to show whether the field of choice for an author selecting a type species was limited to those nominal species recognised as taxonomically valid by the original author of the generic name or whether in addition a nominal species cited by the original author of a generic name in the synonymy of any one of the nominal species placed by him in the genus as representing taxonomically valid species was also eligible for selection as the type genus. Moreover, there was no express provision in Article 30 on the question whether the selection as the type species of a genus of a nominal species not cited by the original author of a generic name should be accepted or rejected in those cases where later authors subjectively identified the nominal species so selected with one of the nominal species actually cited by the original author at the time when the generic name was first validly published. In 1948, however, these obscurities were removed when the Thirteenth International Congress of Zoology, on the advice of the International Commission on Zoological Nomenclature, decided to insert in the *Règles* words making it clear that "the nominal species to be regarded as having been included in a given nominal genus when the name of that genus was first published are (i) the nominal species cited by the original author as valid taxonomic species belonging to that nominal genus and (ii) any nominal species cited on that occasion as synonyms of nominal species falling in (i) above and that for such a nominal genus the foregoing nominal species were alone eligible for selection as the type species" (see 1950, *Bull. zool. Nomencl.* **4** : 179-180).

(b) The field within which alone a valid type-selection for "Colymbus" Linnaeus, 1758, can be made under the "Règles"

23. The content of the nominal genus "Colymbus" Linnaeus, 1758, for nomenclatorial purposes : The name *Colymbus* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) **1** : 135) was published for a nominal genus to which at that time Linnaeus referred four nominal species, namely :—(1) *Colymbus arcticus* Linnaeus (: 135); (2) *Colymbus cristatus* Linnaeus (: 135); (3) *Colymbus auritus* Linnaeus (: 135); (4) *Colymbus podiceps* Linnaeus (: 136). Under the clarification of the meaning to be attached to the expression "originally included species" prescribed by the Thirteenth International Congress of Zoology in 1948 (see paragraph 22 above), the four nominal species bearing the foregoing specific trivial names are the only nominal species eligible to become the type species of the nominal genus *Colymbus* Linnaeus, 1758.

(c) The authors who, it has been claimed, either selected a type species for the nominal genus "Colymbus" Linnaeus, 1758, or took action having an equivalent effect

24. Latham, 1707: The first author who, it has been claimed, took action having the effect of determining the type species of the nominal genus *Colymbus*

Linnaeus, 1758, was Latham (1787, *Suppl. gen. Synopsis Birds* [1]: 294). The argument adduced runs as follows :—(1) The genus *Colymbus* as established by Linnaeus in 1758 was heterogeneous from the taxonomic standpoint, containing (a) one palmate-footed species (*pedibus palmatis*), the Northern Diver, *Colymbus arcticus*, and (b) three pinnate-footed species (*pedibus lobatis*), the Grebes *Colymbus cristatus*, *auritus* and *podiceps*. (2) Latham (1787) recognised the impropriety, from the systematic point of view, of including these disparate elements in a single genus and accordingly, as a first reviser, rectified the position (in the tabular statement at the end of his first supplementary volume) by erecting a new genus which he named *Podiceps* (: 294) and to which he assigned the three Grebes which Linnaeus had placed in *Colymbus* (i.e., *C. cristatus*, *auritus* and *podiceps*), together with other Grebes, and which he placed in his “Order VIII. With pinnated feet”; at the same time Latham retained (: 295) the genus *Colymbus* Linnaeus, placing in it the only remaining species (*Colymbus arcticus*) that Linnaeus had placed in his genus *Colymbus*, together with other Divers. This genus Latham placed in his “Order IX Webfooted.” (3) The removal by Latham from the genus *Colymbus* Linnaeus of the three Grebes placed in it by Linnaeus in 1758, by the transfer of those species to his new genus *Podiceps*, left, so it was argued, only one species in the genus *Colymbus* Linnaeus as constituted in 1758, namely the nominal species *Colymbus arcticus* Linnaeus, and in consequence that species, by virtue of Latham’s action, automatically became the type species of *Colymbus* Linnaeus, 1758, under the “Law of Elimination.” This argument, which was originally advanced before the introduction of the present *Règles*, is invalid, since those *Règles* do not recognise a “Law of Elimination” as a mandatory provision for the determination of the type species of genera (paragraphs 16 and 17 above).

25. Gray (G. R.), 1840 : In 1840 (*List Genera Birds* : 76) Gray (G. R.) selected *Colymbus glacialis* Linnaeus, 1766 (*Syst. Nat.* (ed. 12) 1(1): 221) as the type species of the genus *Colymbus* Linnaeus, to which name Gray did not attribute a date. This nominal species was not one of the four such species placed by Linnaeus in the genus *Colymbus* in 1758 (see paragraph 23 above)—and, indeed, could not have been so included, for its name was not published until eight years later. Thus, this nominal species is ineligible to become the type species of the nominal genus *Colymbus* Linnaeus, 1758, and Gray’s action in so selecting it is therefore invalid.

26. Gray (G. R.), 1841 : In 1841 (*List Genera Birds* (ed. 2): 96) Gray again treated *Colymbus glacialis* Linnaeus, 1766, as the type species of *Colymbus* Linnaeus, to which, as in the first edition he attributed no date. This type selection is invalid for the same reasons as is the same selection made by Gray in 1840 (see paragraph 25 above).

27. Gray (G. R.), 1842 : In 1842 (*Appendix List Genera Birds* : 15) Gray published a sixteen-page pamphlet in which he added supplementary notes in regard to certain of the generic names included in the second edition of his *List*. Many of these notes consisted in the attribution of dates to generic names previously published without information on this point. In the case of the name *Colymbus* Linnaeus, the entry in the Appendix of 1842 was :—“*Colymbus*, after *L.* add 1735.” From the point of view of nomenclature, this entry would

have been of great importance, if in other respects the type selection for the genus *Colymbus* Linnaeus made in the Second Edition of Gray's *List* had complied with the *Règles* (which, as we have seen—paragraph 26 above—it did not), for the insertion of the date “1735” after the name *Colymbus* L. shows that Gray was dealing not with the Tenth Edition of the *Systema Naturae* of 1758 (the starting point of zoological nomenclature) but with the use of that name by Linnaeus in 1735 in the First Edition of the *Systema Naturae*. Under the *Règles* action taken in respect of a name as published prior to 1758 is totally irrelevant from the point of view of determining the type species of a nominal genus established after the starting point of zoological nomenclature (i.e. a name published in, or after, 1758) (see paragraph 20 above) and the selection of a type species of a genus, if related to any place of publication other than the first place in which that name was validly published, is invalid, having no force under Article 30 (see paragraph 21 above).

22. Gray (G. R.), 1855 In 1855 there appeared what was, in effect, a third edition of the *List of Genera of Birds*, of which, as we have seen (paragraphs 25 and 26 above) the First and Second Editions were published respectively in 1840 and 1841; it was however published under a slightly different title and it accordingly ranks for bibliographical purposes as a separate work. In this latest work Gray (1) adhered to the dating of the name *Colymbus* Linnaeus adopted in his *Appendix* of 1842, that is, he attributed it to the First Edition of the *Systema Naturae* of 1735 and not to the Tenth Edition of 1758, and (2) made a fresh type selection for the genus *Colymbus* abandoning his earlier selection of *Colymbus glacialis* Linnaeus, 1766, adopting in its place *Colymbus arcticus* Linnaeus, 1758. If Gray's action on this occasion had otherwise been in conformity with the *Règles*, the selection of *C. arcticus* Linnaeus would have been valid, since that nominal species is one of those referred to the genus *Colymbus* by Linnaeus in 1758. But the fact that Gray attributed the name *Colymbus* to a place of publication other than the place where that name was first validly published after the starting point of zoological nomenclature (i.e. other than the Tenth Edition of the *Systema Naturae*) renders his action in 1855 invalid for the reasons explained in paragraphs 20 and 21 above.

29. Fitzinger, 1865 : In 1926 (*Ibis* (12)4 : 819) Selater advanced the view that in 1865 (*SitzBer. Akad. wiss. Wien* (Math-Naturw. Kl.) 51 : 320) Fitzinger had selected *Colymbus arcticus* Linnaeus, 1758, as the type species of the nominal genus *Colymbus* Linnaeus. As however was pointed out by Hellmayr & Conover in 1948 (*Field Mus. Publ. Chicago* (Zool.) 13 (Pt. 1) (No. 2) : 18, footnote), Fitzinger expressly stated in the preface to his paper that what he intended to do was to cite for each of the genera and subgenera concerned one of the typical species. The supplementary provision annexed to Rule (g) in Article 30 lays it down that the citation of a species as an example of a genus does not constitute the selection of that species as the type species of the genus concerned (see paragraph 14 above). Accordingly, Fitzinger's action in 1865 does not constitute a valid selection of *Colymbus arcticus* Linnaeus as the type species of *Colymbus* Linnaeus, 1758.

30. Baird, Brewer & Ridgway, 1884 : In 1884 (*Water Birds N. Amer.* 2 : 425) Baird, Brewer & Ridgway, when dealing with the genus *Colymbus*

Linnaeus, 1758, stated that *Colymbus cristatus* Linnaeus, 1758, was the "Type, by elimination." This species is, as we have seen (paragraph 23) one of these originally included by Linnaeus in the genus *Colymbus* in 1758, and, as in 1884 that genus was still without a validly determined type species, it was eligible for selection as such. The only argument which could at any time have been advanced against the acceptance of the action by Baird, Brewer & Ridgway as constituting a type-selection for the genus *Colymbus* Linnaeus, 1758, was that those authors did not look upon themselves as selecting *Colymbus cristatus* Linnaeus as the type species of this genus—indeed, they made it clear that they deplored the necessity of accepting it as such—but on the contrary considered that that species had already become the type species "by elimination." As explained in paragraph 19 above, consideration was given in 1948 both by the Commission and by the International Congress of Zoology to the question whether a definite statement that a given nominal species was the type species of a particular genus constituted a selection of that species as the type species when the author making the statement made it clear that he did not regard himself as so selecting the species in question, considering rather that for one reason or another that species had already become the type species as the result of action taken by earlier authors; it was then decided that such a statement should be accepted as constituting a selection under Rule (g) in Article 30, provided that the author making the statement made it clear that he himself recognised the species in question as the type species of the genus concerned. Baird, Brewer & Ridgway made it perfectly clear that they regarded *Colymbus cristatus* Linnaeus as the type species of *Colymbus* Linnaeus, 1758, and accordingly the possible objection to the acceptance of their action is now seen to be without foundation.

31. Action by authors subsequent to Baird, Brewer & Ridgway, 1884: Once a nominal genus has validly acquired a type species under the provisions of Article 30, no action by any later author can change the type species of that genus. In the present case, we have seen (paragraph 30 above) that in 1884 the nominal genus *Colymbus* Linnaeus, 1758, which up to that time was without a type species under the *Règles*, acquired a type species through the selection as such of *Colymbus cristatus* Linnaeus, 1758, by Baird, Brewer & Ridgway. I have therefore considered unnecessary in the present Report to recapitulate the later history of the generic name *Colymbus* Linnaeus, 1758. I have however examined later papers on this subject for the purpose of ascertaining whether any of them contain new evidence relevant to the present subject. I find that they do not. Those authors (e.g. Stejneger) who applied the name *Colymbus* Linnaeus to the Grebes have based themselves on the selection, as the type species of this genus, of *Colymbus cristatus* Linnaeus, 1758, by Baird, Brewer & Ridgway (1884) or upon the later similar selection by the A.O.U. in 1886 (*Check-List N. Amer. Birds*: 73), while those authors who have applied this name to the Divers (Loons) have either (as did Witmer Stone in 1926) accepted Gray's (1855) selection of *Colymbus arcticus* Linnaeus, 1758, or (as did Lonnberg in 1927) have argued in favour of the view that the same species should be accepted as the type species as the result of the action taken in 1787 by Latham, when establishing the nominal genus *Podiceps*.

III. PRINCIPAL CONCLUSIONS AND FINDING

32. Principal Conclusions : Having thus completed the survey of the problem involved in determining what species is, under the *Règles*, the type species of the genus *Colymbus* Linnaeus, 1758, which in Paris in 1948 I was invited to undertake, I now submit as follows the principal conclusions which I have reached :—

- (1) The type species of the nominal genus *Colymbus* Linnaeus, 1758, was neither designated under Rule (a) in Article 30 nor indicated under any of the Rules lettered (b), (c), (d) or (f) in that Article (paragraphs 5-10).
- (2) In view of (1) above, the type species of the foregoing nominal genus falls to be determined under Rule (g) in Article 30 (type species by subsequent selection) (paragraph 11).
- (3) Latham (1787), when establishing the nominal genus *Podiceps* and transferring thereto the three Grebes referred to the genus *Colymbus* by Linnaeus in 1758, thus leaving in the genus *Colymbus* Linnaeus, 1758, only one of the species referred thereto by Linnaeus in 1758, namely the Diver, *Colymbus arcticus* Linnaeus, 1758, did not thereby make that species the type species of *Colymbus* Linnaeus. For Article 30 of the *Règles* does not recognise the so-called "Law of Elimination" and under the *Règles* it was legitimate for any later author to select any of the originally included species to be the type species of *Colymbus* Linnaeus, 1758, notwithstanding the action taken by Latham in 1787 (paragraph 24).
- (4) The selection by Gray in 1840 and again in 1841 of *Colymbus glacialis* Linnaeus, 1766, as the type species of *Colymbus* Linnaeus, 1758, is invalid, because that nominal species was not one of the nominal species referred to the genus *Colymbus* by Linnaeus in 1758 and, indeed, could not have been so referred, as it was not named until eight years later (paragraphs 25 and 26).
- (5) The selection by Gray in 1855 of *Colymbus arcticus* Linnaeus, 1758, as the type species of the genus *Colymbus* is invalid, since that selection related not to the nominal genus *Colymbus* Linnaeus, 1758, but to the pre-1758 nominal genus *Colymbus* Linnaeus, 1735 (paragraph 28).
- (6) Fitzinger (1865) cited *Colymbus arcticus* Linnaeus, 1758, as one of the typical species of the genus *Colymbus* Linnaeus, 1758, but he did not select that species to be the unique type species of that genus. Accordingly, under the provision in Rule (g) in Article 30 that the expression "select the type" is to be "rigidly construed," Fitzinger did not select a type species for *Colymbus* Linnaeus, 1758 (paragraph 29).
- (7) Baird, Brewer & Ridgway in 1884 stated that *Colymbus cristatus* Linnaeus, 1758, was the type species of *Colymbus* Linnaeus, 1758. That nominal species is one of those originally included in the genus *Colymbus* by Linnaeus in 1758, and was therefore eligible for

selection as the type species of that genus. Under Rule (g) in Article 30, as clarified by the Thirteenth International Congress of Zoology in 1948, the validity of the action taken by the foregoing authors is not impaired by the fact that they regarded themselves not as selecting the above species to be the type species of *Colymbus* Linnaeus, 1758, but as merely recording (incorrectly) that it was already the type species "by elimination" (paragraph 30).

33. FINDING. In discharge of the duty entrusted to me in 1948, jointly by the Thirteenth International Congress of Zoology and the International Commission on Zoological Nomenclature, I have to report that, in the light of the conclusions summarised in the preceding paragraph, my Finding on the question referred to me is as follows :—

Under the "Règles" the type species of the nominal genus "Colymbus" Linnaeus, 1758, is the nominal species "Colymbus cristatus" Linnaeus, 1758, that nominal species being one of those included by Linnaeus in the nominal genus "Colymbus" in 1758 and being the first such species to be validly selected under Rule (g) in Article 30 to be the type species of this nominal genus, having been so selected by Baird, Brewer & Ridgway in 1884

(signed) FRANCIS HEMMING.

9th February 1950.